

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016345**Date Inspected:** 07-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 11**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as Tower Strut. The weld designations reviewed are as follows.

WD1-STSA4-5-135M-1-5,6,37,38,40,35,36,15,31,38,47,48,28,13,43,44,7,8

WD1-STSA4-5-139M-1-5,6,37,38,40,35,36,15,31,38,47,48,28,13,43,44,7,8

NDT Notification No-06348

This QA Inspector observed the following work in progress:

**BAY 11: SMAW Process.**

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-7-3B. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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This QA Inspector observed ZPMC qualified welding personnel identified as 046704, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as ESD1-SPSA5-17-3B. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040611, 040610 Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2B-F-13. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

This QA Inspector observed ZPMC qualified welding personnel identified as 040724, 041271 Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2E-F-13B. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 046709, 046769 Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2F-F-12A. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 040724, 041271 Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2E-F-13A. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 066002, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage plate. Joint identified as WSD1-TL5-4B-F-23. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

### SMAW process Repair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on Tower 3rd Lifting stiffener connect plate. Plate identified as SA3-433. weld build up buttering up to 5mm on edge. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report WRR-T-WR3479. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F) Repair. For more information see below attached picture number 1.

### BAY 10, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 066471, 066361, Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5 Grillage plate. Joint identified as NSD1-TL5-3B-F-15. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

This QA Inspector observed ZPMC qualified welding personnel identified as 066443, 067707, 037840, 066155, Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5 Grillage plate. Joint identified as NSD1-TL5-3B-F-25A, 34A. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 66401, 66398, 067993, 066674, Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5 Grillage plate. Joint identified as NSD1-TL5-3F-F-4B, 1A. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

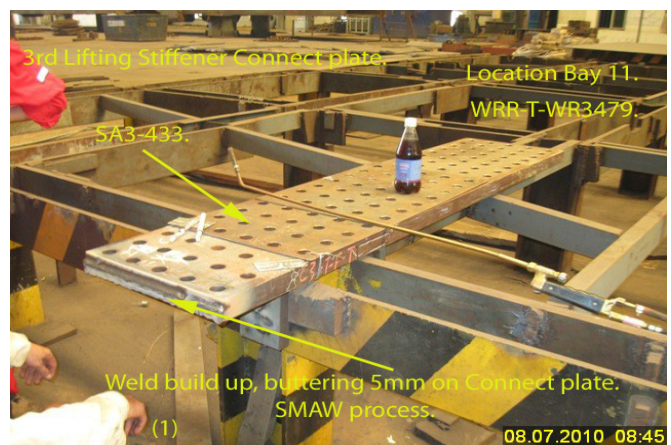
## SMAW process Repair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 040268, 053829, Perform Shielded Metal Arc Welding (SMAW) on Tower Façade plate. Plate identified as NDI-SFSA4-336. weld build up, buttering up to 8~10mm on edge. ZPMC QC Identified as Jiang Xiang Bo with temporary welding repair report WRR-T-WR3477. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F) Repair.

## BAY 10 OBG Lift 13 Bike path stringer plate:

This QA Inspector observed ZPMC qualified welding personnel identified as 057180, 053870, 052075, 053869 Perform Flux Core Arc Welding (FCAW) on Stringer plate, Bike Path of OBG lift 13. Joint identified as BK004A6-026-95 and BK004A6-027-112. ZPMC QC Identified as Yuan Hai Gang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2131. For more information see below attached picture number 2.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

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## WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng Phone: 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Gaikwad,Shailesh
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Clifford,William
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QA Reviewer
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